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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/720,212	11/25/2003	Sae-Dong Jang	P24625	4970
7055	7590	06/06/2006	EXAMINER	
GREENBLUM & BERNSTEIN, P.L.C. 1950 ROLAND CLARKE PLACE RESTON, VA 20191			CIRIC, LJILJANA V	
			ART UNIT	PAPER NUMBER
			3753	

DATE MAILED: 06/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/720,212	Applicant(s) JANG ET AL.	
	Examiner Ljiljana (Lil) V. Ciric <i>AVC</i>	Art Unit 3753	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 13 March 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) 6 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 7-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>09212005</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election with traverse of the first species in the reply filed on March 13, 2006 is acknowledged. The traversal is on the grounds that it would not appear to be a serious burden on the examiner to search all of the species together. This is not found persuasive because it is well known that examiners have a limited amount of time allotted per application, and because searching for the additional features associated with additional species/inventions would either reduce the amount of time available to examine each claimed species or necessitate that the examiner spend extra time to perform a complete search of all of the claimed species/inventions.

Also, in response to applicant's allegation that claim 1 is generic, it is countered that claim 1 is not generic because not all of the limitations of claim 1 are included in all other claims.

The requirement is still deemed proper and is therefore made FINAL.

2. Claim 6 is thus withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected second species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on March 13, 2006.

### ***Priority***

3. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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5. Claims 1 through 5 and 7 through 10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is not clear what particular structural configuration is intended to be encompassed by the idiomatically improper limitation “adjacently arranged to the compressor” [claim 1, line 6; claim 8, line 5], thus rendering each of base claims 1 and 8, as well as all claims depending therefrom, indefinite with regard to the scope of protection sought.

Other limitations which lack clarity because of idiomatically improper expressions are: “a drier for removing moisture included in a refrigerant” [claim 5, lines 2-3] and “an electron expansion valve” [claim 7, line 2].

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. As best can be understood in view of the indefiniteness of the claims, claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 1-300169 (made of record via IDS).

JP 1-300-169 discloses an air conditioner essentially as claimed, including, for example, an outdoor heat exchanger 26, an indoor heat exchanger 24, a four-way valve 23, a compressor 21, an outdoor expansion device 28 or 25, and a heat exchanging device 22.

The reference thus reads on the claims.

8. Alternately for claims 1 and 2 and as best can be understood in view of the indefiniteness of the claims, claims 1, 2, and 7 through 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Dudley.

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Dudley discloses an air conditioner essentially as claimed, including, for example, an outdoor heat exchanger 18, an indoor heat exchanger 17, a four-way valve 15, a compressor 12, an electronically controlled outdoor expansion device or valve 55, a heat exchanging device 30, and an accumulator 27 arranged between the inlet of the compressor 12 and an outlet of the four-way valve 15.

The reference thus reads on the claims.

9. Alternately for claims 1, 2, and 7 through 9, and as best can be understood in view of the indefiniteness of the claims, claims 1, 2, 4, and 7 through 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Morita.

Morita discloses an air conditioner essentially as claimed, including, for example, an outdoor heat exchanger 8, an indoor heat exchanger 5, a four-way valve 4, a compressor 12, an electronically controlled outdoor expansion device or valve 16, a heat exchanging device 3, and a two additional three-way valves such as 6 and 18.

The reference thus reads on the claims.

10. Alternately for claims 1, 2, 4 and 7 through 9, and as best can be understood in view of the indefiniteness of the claims, claims 1 through 4 and 7 through 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Gertreis.

Gertreis discloses an air conditioner essentially as claimed, including, for example, an outdoor heat exchanger 17, an indoor heat exchanger 22, a four-way valve 20, a compressor 3, an electronically controlled outdoor expansion device or valve 30, a heat exchanging device 23 including a refrigerant detouring path formed as a curved pipe therein.

The reference thus reads on the claims.

***Claim Rejections - 35 USC § 103***

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. As best can be understood in view of the indefiniteness of the claims, claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dudley in view of JP 11-108507 (made of record via IDS).

As noted in greater detail above, Dudley discloses an air conditioner essentially as claimed, except for not disclosing the air conditioner as including either a receiver or a drier. It is well-known in the refrigeration art and taught by JP 11-108507 to provide a drier between an outdoor expansion device and a receiver in an air conditioning system in order to improve humidity control within the system while maintaining the refrigerant pressure at a desired operating level.

Thus, it would have been obvious to one skilled in the art at the time of invention to modify the air conditioning system of Dudley by adding a receiver and a drier in line with the outdoor expansion device in order to maintain the refrigerant pressure within desired limits while also helping to improve humidity control within the system and thereby more efficiently provide cooler, drier air for increased comfort.

### *Conclusion*


13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ljiljana (Lil) V. Ciric whose telephone number is 571-272-4909. The examiner can normally be reached on Mondays through Fridays from 10:00 a.m. to 6:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eric Keasel, can be reached at 571-272-4929.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

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you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC)  
at 866-217-9197 (toll-free).



Ljiljana (Lil) V. Ciric  
Primary Examiner  
Art Unit 3753